

REMARKS/ARGUMENTS

Applicant has carefully reviewed and considered the Office Action mailed on January 10, 2006, and the references cited therewith.

Claims 1, 4-6, 8-10, 12-14, 16, 18-19, 37-40, 48, 51, 53, and 55 are amended, and no claims are canceled or added; as a result, claims 1-56 are now pending in this application.

§ 112 Rejection of the Claims

Claims 1, 4, 5, 8, 9, 12, 13, 16 and 17 were rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Applicant has made appropriate amendments to the above listing of the claims by implementing the Examiner's helpful suggestions. However, claim 17 did not recite the limitation "the metal oxide", so claim 17 presently remains in its original form.

§103 Rejection of the Claims

Claims 1-20, 37-44 and 48-57 were rejected under 35 USC § 103(a) as being unpatentable over Cillessen (U.S. Patent No. 5,744,864). Applicant respectfully traverses the rejection as follows.

Applicant notes that the Examiner only has cited a single reference in support of the 103 rejection of all claims in the present application, which requires a high level of correlation between what is described in the cited reference and the claims proffered in the application. Applicant submits that the description in Cillessen is insufficient to describe, teach, or suggest the claims of the present application because each and every element and limitation is not explicitly or implicitly stated, unless combined with another reference or the Examiner's personal knowledge. In such case, Applicant respectfully requests that the Examiner provide a specific document or an affidavit to support an obviousness rejection.

With regard to independent claim 1, as amended, the Cillessen reference discloses eight binary oxides containing the elements Ga, Bi, Sn, Zn, Sb, Pb, Ge,

and In. (Col. 5, lines 40-41). The number of possible combinations in oxides containing one to eight of these elements not combined with itself is 8 factorial (40,320) and mixtures in ternary oxides not containing one of the elements combined with itself is $8 \times 7 = 56$. Of those 56 combinations, Cillessen only discloses three ternary oxides, i.e., GaInO_3 , ZnGa_2O_4 , and CdGa_2O_4 . (Col. 5, line 42). As such, Cillessen does not disclose any of the ternary compounds recited in independent claim 1, which recites, “wherein each A is selected from the group of Ga, In, each B is selected from the group of Ge, Sn, Pb, each O is atomic oxygen”.

The number of ternary oxides left unspecified by Cillessen (i.e., 53) leaves it up to the imagination of the inventor to formulate different ternary compounds.

MPEP section 2143.01 states:

A statement that modifications of the prior art to meet the claimed invention would have been “ ‘well within the ordinary skill of the art’ at the time the claimed invention was made’ ” because the references relied upon teach that all the aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references.

The cited MPEP section goes on to state that “The level of skill in the art cannot be relied upon to provide the suggestion to combine references.”

Accordingly, the broad characterization of possible combinations of the stated elements in Cillessen, along with the narrow range of ternary examples provided therein, does not render obvious to one of ordinary skill in the art the six combinations of elements in ternary oxides (i.e., $\text{Ga}_x\text{Ge}_x\text{O}_x$, $\text{Ga}_x\text{Sn}_x\text{O}_x$, $\text{Ga}_x\text{Pb}_x\text{O}_x$, $\text{In}_x\text{Ge}_x\text{O}_x$, $\text{In}_x\text{Sn}_x\text{O}_x$, and $\text{In}_x\text{Pb}_x\text{O}_x$) made possible by the recitation of claim 1.

Independent claim 18, as amended, recites, “wherein each A is selected from the group of Ga, In, each B is selected from the group of Ge, Sn, Pb, and each of A and B are different”.

Independent claim 37, as amended, recites, “wherein each A is selected from the group of Ga, In, each B is selected from the group Ge, Sn, Pb, each x is independently a non-zero number, and wherein each of A and B are different”.

In addition, independent claim 48, as amended, recites, “wherein each A is selected from the group of Ga, In, each B is selected from the group of Ge, Sn, Pb,

each O is atomic oxygen, each x is independently a non-zero number, and wherein each of A and B are different”.

As such, Applicant respectfully submits that the Cillessen reference does not describe, teach, or suggest each and every element and limitation in independent claims 1, 18, 37, and 48, as amended.

Furthermore, Cillessen does not, by stating a list of elements, but specifying no compounds for the channel that contain more than two from the list in combination with oxygen, make obvious to one of ordinary skill in the art the specific oxide compounds containing four, five, or six different listed elements that are made possible by the dependent claims of the present application.

Accordingly, Applicant respectfully requests reconsideration and allowance of independent claims 1, 18, 37, and 48, as amended, as well as those claims that depend therefrom.

With regard to dependent claims 3, 19, and 57, the Examiner takes Official Notice by stating that “it is well known in the art to form metal oxides in amorphous form.” MPEP section 2144.03 states:

It would not be appropriate for the examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known. For example, assertions of technical facts in the areas of esoteric technology or specific knowledge of the prior art must always be supported by citation to some reference work recognized as a standard in the pertinent art.

Applicant respectfully requests a “citation to some reference work recognized as a standard in the pertinent art” that supports stating that “it is well known in the art to form metal oxides in amorphous form.”

Applicant respectfully submits that a “channel”, as recited in dependent claims 3 and 57, or a “means for controlling current flow”, as recited in dependent claim 19, comprising metal oxides (e.g., ZnO) is difficult to prepare in an amorphous form and, therefore, is not commonly done. As such, Applicant respectfully submits that utilizing one or more compounds of the formula $A_xB_xO_x$ in amorphous form is “not capable of instant and unquestionable demonstration as

being well-known.” Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 103 rejection of dependent claims 3, 19, and 57.



CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney Donald J. Coulman at (541) 715-1694 to facilitate prosecution of this matter.

At any time during the pendency of this application, please charge any additional fees or credit overpayment to the Deposit Account No. 08-2025.

CERTIFICATE UNDER 37 CFR §1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS AMENDMENT Commissioner for Patents, P.O. BOX 1450, Alexandria, VA 22313-1450 on this 10th day of March, 2006.

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